SURVEY OF NEW BRUNSWICK SHEEP PRODUCERS

RESULTS AND ANALYSIS

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SHEEP REPORT

Research Design

The survey was designed in conjunction with Brian Trenholm, the New Brunswick Department of Agriculture's Sheep Specialist, and was tested on two producers. Following the tests some revisions were made and the survey was then mailed, along with a postage paid return envelope to all the province's sheep producers.

An original mailing list of 265 names was received. Ten names were added as recent entries to lamb production. Seventeen were removed because they had out-of-province mailing addresses and another 32 were removed by Brian Trenholm because they no longer had sheep. This left a total of 228 to which 10 names were later added but their addition was too late to be included in the survey.

The survey, postage paid return envelope and a covering letter were originally mailed to sheep producers December 1, 1987. A follow-up letter was mailed January 15, 1988. A second follow-up letter was mailed February 29, 1988. The second reminder also included a second copy of the survey and return envelope.

The response rate was 59.7%. This number will be used later to project the totals from completed questionnaires to an industry total. Of the 142 respondents, 27 no longer had sheep, six surveys were so incomplete or improperly completed that they

could not be used and three were either partners or spouses of another producer so to include them would have been double counting. This left 106 completed applications from active sheep farmers.

Research Results

Producer Profile: As Table 1 below indicates, almost one third of the sheep producers have been in this business for five years or less. It is good for the future of this sector of agriculture that new producers are entering. Sixty-eight percent of the provinces 180 sheep producers are part-time farmers.

Table 1

Producers' Experience in Sheep Production

Number of Years	Percentage of Producers
Five or less	32%
Six to Fifteen	30%
Sixteen to Twenty-Five	15%
More than Twenty-Five	23%

Sheep production is normally one of a number of commodities being produced on the farm. 64% of producers reported that revenues derived from sheep accounted for zero to 25% of their farm income. Only 21% reported that revenues from sheep operations accounted for 75-100% of their farm incomes. Producers reported producing a number of other commodities. These are shown in Table 2. The percentages do not add to 100% because

some producers mentioned more than one commodity. Some of the other commodities reported included; hay, grain, goats, oats, wood and strawberries.

Table 2
Other Commodities Produced

Commodity	Percentage of Producers
Beef	52%
Hogs	13%
Chicken	9%
Dairy	8%
Potatoes	11%
Other Vegetables	13%
Fruit	6%
Eggs	9%
Other	23%

Flock Size: When producers were questioned about the size of their breeding flock, they were asked for the number of mature ewes and ewe lambs so that we could determine what the replacement rate was and how much herd building was going on. Table 3 shows the size of the New Brunswick breeding flock in 1986 and 1987, and the projected size for 1989.

Table 3

Total Provincial Flock Size and Replacement Rate

Year	Mature Ewes	Ewe Lambs	Total Breeding Stock	Replacement Rate
1986	4781	898	5678	19%
1987	5075	1037	6112	20%
1988	--	--	7812	--

The simple replacement rate calculated in the table above can be further broken down into actual replacements and herd expansion. The actual replacement rate is 13% (604 head). Flock growth through the addition of ewe lambs over and above those required for replacement was 6% (294 head) from 1986 to 1987.

Further herd expansion was undertaken in the fall of 1987 with producers adding 1037 additional ewe lambs for an increase in total breed stock of 8%. This increasing trend in breeding stock numbers is projected to continue in 1989 when producers expect a total of 7812 head or 28% growth over a two year period. This growth trend will see the average flock size increase from 33 head of breeding stock in 1986, to 36 head in 1987 and to 48 head in 1989.

When comparing years of experience to future plans and flock size, it can be seen that the likelihood of planned increases decreases with years of experience. This means that new entrants with five years or less experience are the producers planning the largest flock increases. This is illustrated by table 4 which compares years of experience to average flock size. The percentage of producers planning to maintain their flock size increases with years of experience. There is no trend relating to years of experience to planned decreases, however, the number of producers with 16 to 25 years experience planning to decrease their herd size is 27%, which is much larger than the next closest segment of 6 to 15 years experience at 7% planning decreases.

Table 4
Years of Experience Versus Flock Size

Years of Experience	Flock Size (head)		
	1986	1987	1989
5 years or less	26.1	39.1	59.2
6 to 15 years	40.6	39.0	48.6
16 to 25 years	33.4	28.7	35.8
More than 25 years	32.2	35.9	42.8

The above trends coupled with the fact that approximately one third of the sheep producers have been in the business five years or less means New Brunswick should expect continued growth in sheep production in the next two to three years.

Lamb Production: The total lamb production for 1987 was 7,345 head with 77% being born in the first four months of the year. The lamb mortality rate in 1987 was 15%, with 10% of the lambs dying within 10 days of birth, and 5% of the lambs dying after 10 days old but before they could reach market. This left 6209 lambs eligible for sale in 1987.

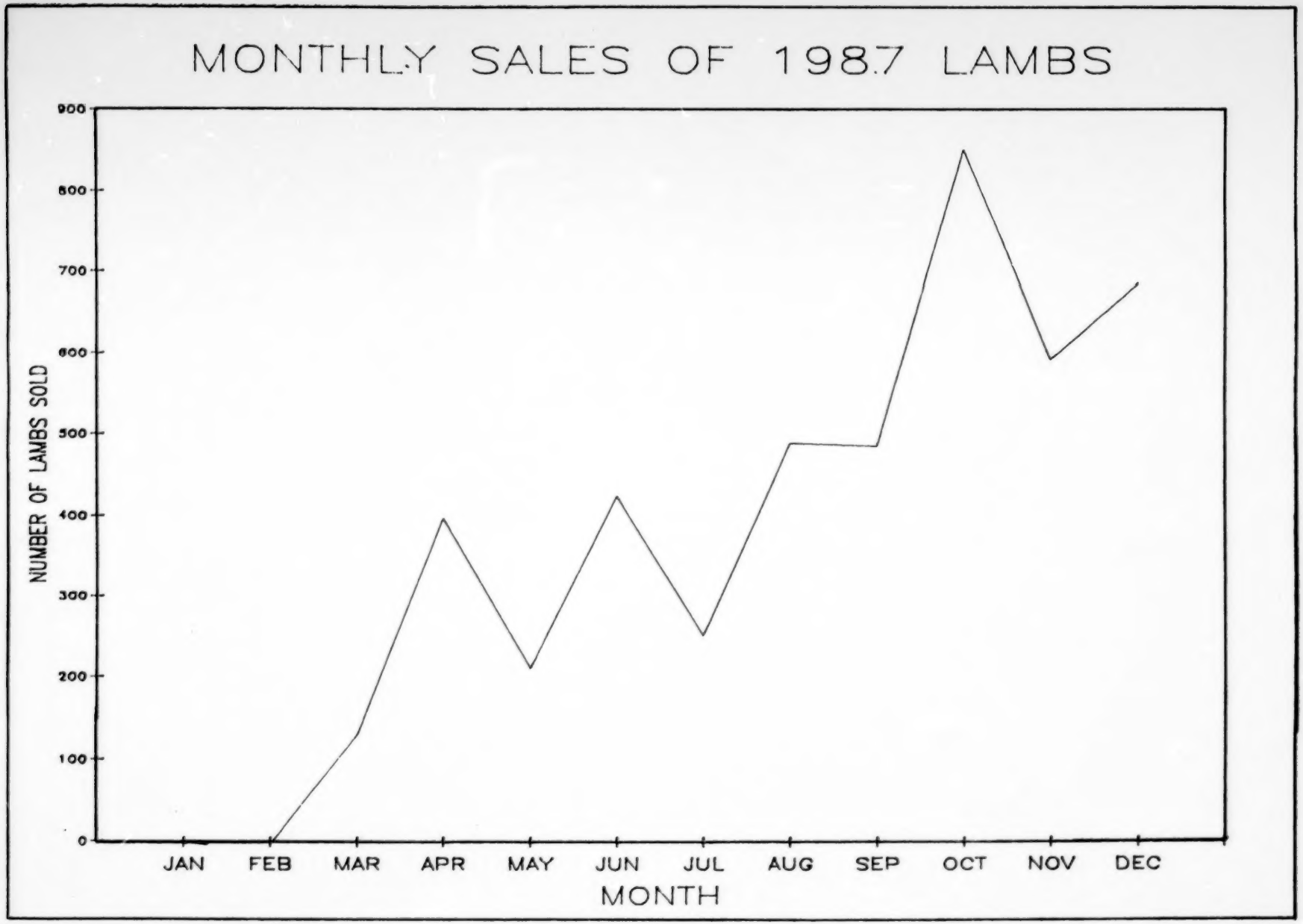
Of the 5% of lambs dying after 10 days, 18% died of pneumonia, 24% of internal parasites, 1% of scour, 33% from predators and 24% of other causes.

The 24% of other causes can be further broken down into 7% coccidiosis with all but one lamb death being on the same farm, and 4% pulp kidney. Not all the respondents selecting other completed the section on providing details of the cause of death. Some of the other causes mentioned were coppers, caught in fence, crushed, strangled, ewes with no milk and drowning.

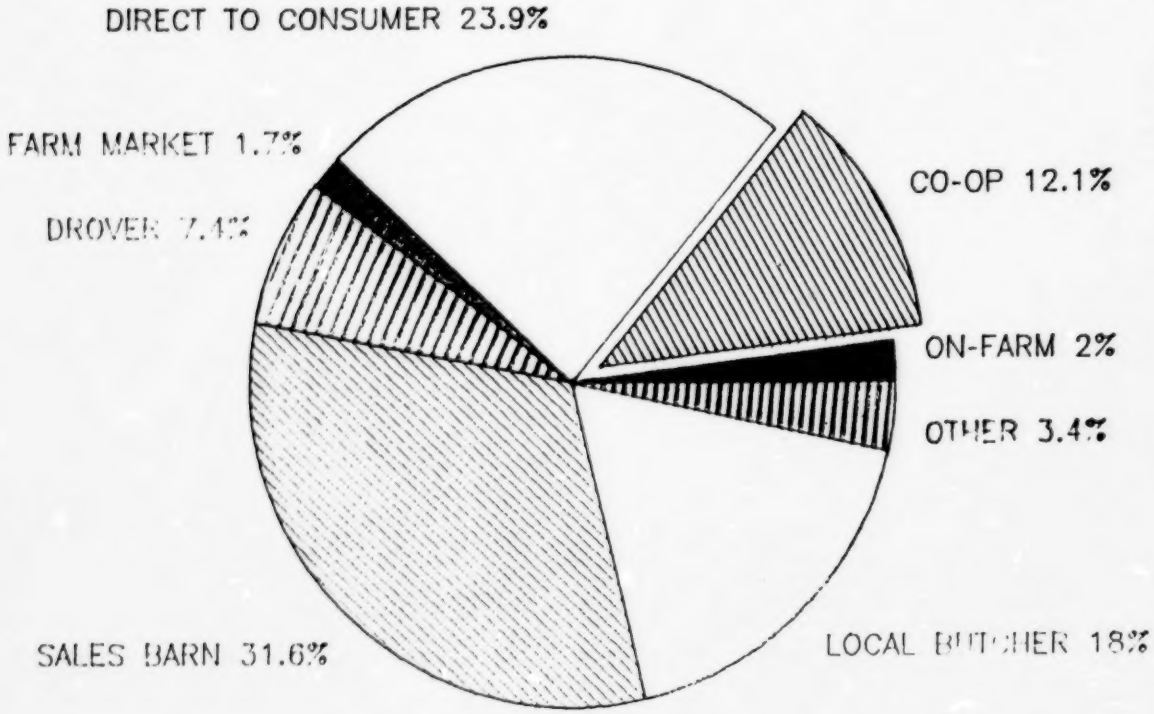
The overall fertility rate for the province was 129% in 1987, with the 5,679 ewes and ewe lambs that were kept for breeding in the fall of 1986 producing 7,345 lambs. It is not possible to determine from this survey if the fertility rate of 129% that produced 1.3 lambs per ewe was due to multiple births or more than one lambing per year for some ewes. If the fertility rate remains the same we could expect that the breeding flock of 6112 ewes and ewe lambs kept on the farm in the fall of 1987 will have produced 7,884 lambs and the projected 1989 flock of 7812 will produce 10,077. The fertility rate is unlikely to benefit from productivity improvements in the short term but they could be improved in the longer term through the introduction of more prolific breeds.

While the questions on breed of ewes and breed of rams were poorly answered, the Suffolk is clearly the most common breed, followed by Dorsets, Leicesters and Hampshires. Breeds mentioned under the other category were North Country Cheviots, Finnsheep, Romney, Corideale and Scottish Black Face for the ewes. Other breeds mentioned for rams were Cheviot, Romanov, Clun Forest, Finnsheep, Polypay and Corideale.

Marketing: As was mentioned in the previous section, 6,209 of the lambs produced in 1987 were eligible for sale. It was also determined that 77% of lamb production occurred in the first four months of the year. It is therefore logical to assume that many of the lambs would be ready for market during a similarly short


MONTHLY SALES OF 1987 LAMBS
NUMBER OF LAMBS SOLD
900
800
700
600
500
400
300
200
100
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
MONTH

METHOD OF SALE FOR NEW BRUNSWICK LAMB



1987

time period. Of the 4535 lambs that were sold or consumed in 1987, 47% were sold or consumed in the last quarter of the year. This is illustrated on the graph "Monthly Sales of 1987 Lambs" on the opposite page. The graph shows only sales of 1987 lambs so that is why no sales appear in January and February. Sales during these months would be lambs carried over from 1986.

The reason that only 4,535 lambs of the 6,209 lambs eligible for sale were sold in 1987 is that 1,037 ewe lambs were kept for breeding. This leaves 637 lambs unaccounted for that would have been carried over into 1988. The number of lambs carried over is a minimum number because some of the ewe lambs for breeding could have come in from another province. The survey was not designed to get any more detail on this point.

The New Brunswick lamb sold in 1987 was sold through a number of different channels. The relative importance of the different "Methods of Sale for New Brunswick Lamb" is illustrated in the graph on the opposite page.

There is no federally inspected slaughter facility in New Brunswick that handles sheep and lambs. This leads to the fragmented approach to marketing that is illustrated in the graph. The majority of grocery stores require that meat be inspected. This means to get lamb into New Brunswick grocery stores it must be trucked to Nova Scotia for slaughter and then returned. This adds to the cost, limits supply in New Brunswick

grocery stores and local consumers are finding other ways to buy lamb. Producers are selling 24% of their lamb direct to consumers and another 18% to local butchers.

Many producers are selling their lambs through sale barns (32%). This can further be broken down to say 6% are selling through sale barns in Sussex and Florenceville. Two percent sold in Truro. The other 24% are selling to other sale barns. Those that did give a location stated the province of Quebec. In addition, 7% sold their lambs directly to drovers. The end result is that at least 33% of New Brunswick lambs are being sold live outside the province. This could potentially be higher, if drovers are buying lambs at Sussex and Florenceville.

The average price received by the producer for a lamb in 1987 was $87.98. The prices ranged from $45.00 up to $135.00. This is an average of all 106 respondents. The wide range in price reflects the varied marketing channels for the lambs and differing levels of finish, maturity and slaughtering.

When the price received by the producers was looked at in conjunction with other variables some conclusions could be made. Those producers receiving higher prices were more likely to be planning to increase their flocks. In addition, it appears that those producers selling direct to consumers and at farmers' markets are getting better prices for their lamb. This is logical because the majority of them would be required to have the product slaughtered and cut for the consumer.

When producers were asked if they planned to make any changes in the way they marketed their lamb, 63% did not indicate that they planned any changes. Table 5 below summarizes the changes that the producers plan to make. Producers have stated more than one option.

Table 5

Planned Changes in Method Lambs are Sold

Sell More to Co-op	12%
Sell More Direct to Consumer	10%
More Sales to Barns	4%
More to the Early Market (June & July)	3%
More to Breeding Stock	2%
More to Local Butcher	2%
Other	5%

Some of the comments under other included, less home butchering, want course on cutting, strong demand at farmers' markets and sell more in New Brunswick. These planned changes show no clear direction towards any preferred marketing alternative and that the approach to marketing New Brunswick lamb will continue to remain fragmented, unless something is done to develop the market in an organized manner.

Marketing Problems: The last question that producers were asked was "What problems, if any, have you had in trying to market your sheep?" All responses are listed below, with responses relating to similar issues being grouped and the percentage of producers giving that response appearing in brackets. 64% of respondents did not state that they had any marketing problems. Other responses are:

- Want information on market information and optimum weights (4%)
- Want information on how to get lambs to optimum weight (1%)
- Held lambs too long and lost money (1%)
- Have to meet the Co-op truck (1%)
- The Co-op truck is late (2%)
- Have to send lambs too far/Transport costs are too high (2%)
- Need slaughter in N.B./Need provincial meat inspection (2%)
- No reply when called Co-op, so gave up on them (1%)
- Need breeding stock (2%)
- Require more information on breeds and production (1%)
- Wary of increasing flock without fencing (1%)
- Slow building of flock due to cost of fencing and liming pasture (1%)
- Coyotes (4%)
- Department of Agriculture people are negative regarding profitability (1%)
- Need full-time sheep specialist (1%)
- Want information on government programs for sheep (1%)
- Newsletter should be 3 or 4 times per year (1%)
- People don't know about lamb/Need consumer education (3%)
- Not enough lamb to meet demand (2%)
- Need better prices (2%)
- Poor quality imports hurt the local product (1%)
- Sold in Quebec because had no contacts in N.B. (1%)
- Ram lambs are slow to move (1%)

Information From Other Sources

Agriculture Canada recently surveyed retail food distributors in Canada and the results were published in a recent Food Market Commentary article. The survey dealt with trends throughout the grocery stores but specific to lamb, the distributors expect that fresh lamb sales, in the next five years will make up a larger portion of retail lamb sales, rising from 36% in 1987 to 45% in 1992. They also expect that the market share for Canadian lamb will increase from 30% in 1987 to 37% in 1992. The increased consumer demand for fresh products might give Canadian lamb producers a competitive edge. Table 6 below shows how the Canadian share of the market differs by region.

Table 6

Market Share of Canadian Lamb by Region

Region	Market Share
British Columbia	41%
Praries	61%
Quebec	9%
Ontario	8%
Atlantic Provinces	29%

These numbers indicate that there is room for increase Canadian production.

The key to increased lamb sales, the consumer, has a mixed picture of lamb. Another article in Food Market Commentary provides a qualitative assessment of Canadian meat consumption patterns. The researchers found that consumers felt lamb was

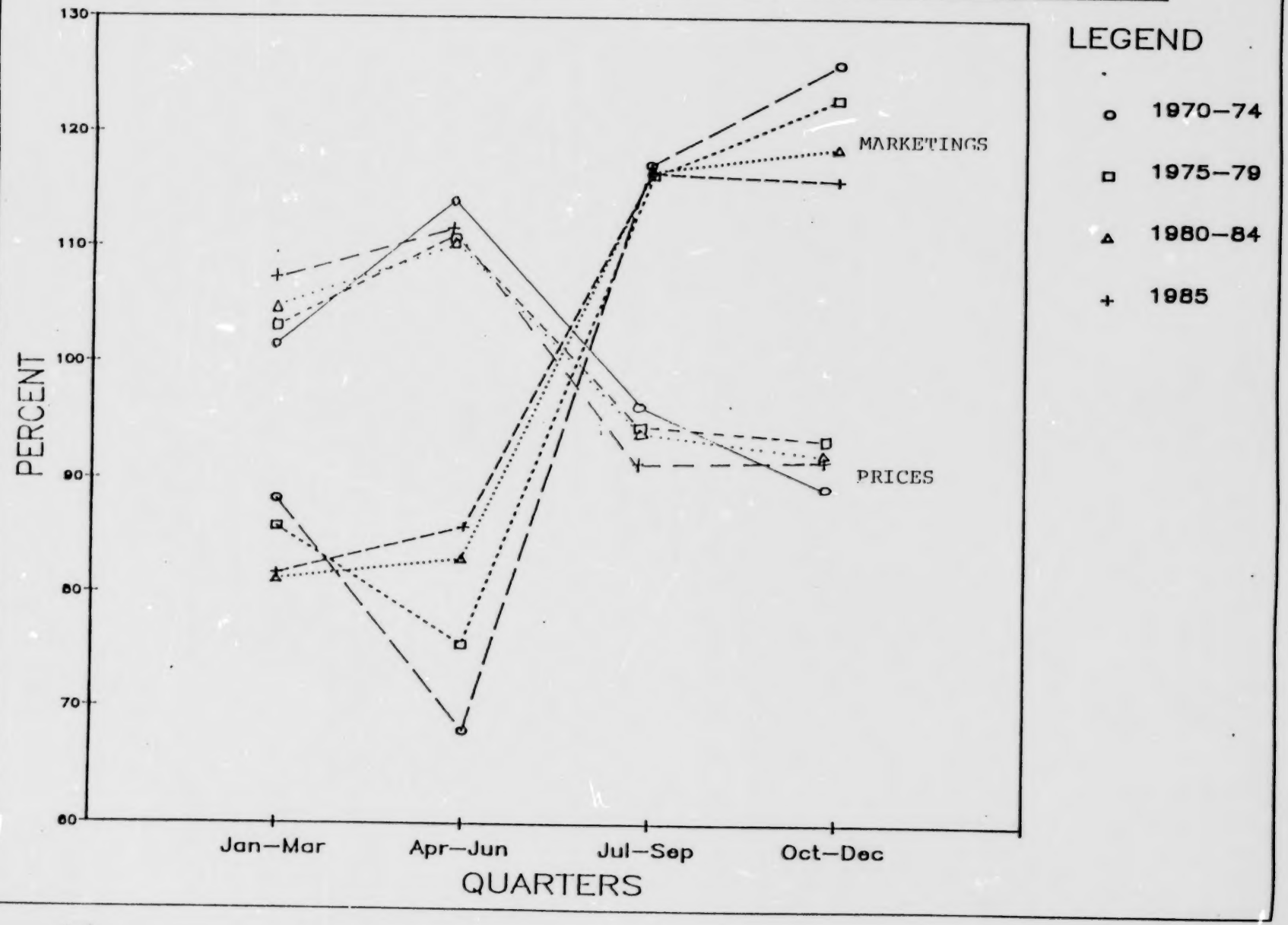
tastier than beef and pork, but was too fatty. Consumers questioned, ate lamb in restaurants more than at home. The researchers were left with the impression that people are not too familiar with the product and preparation skills are required.

The graph on the following page, taken from Yap M. Tan's study of seasonal price and marketing variations, shows the fluctuations in lamb marketings throughout the year. These marketing fluctuations produce countercyclical price fluctuations and mean the consumer must deal with irregular supplies of fresh lamb and volatile price. While Tan's data is quarterly, the pattern of marketings is similar to that shown on the earlier graph of "Monthly Sales of 1987 Lambs" for New Brunswick. The seasonality of supply means that of the 1300 lambs sold by the New Brunswick Sheep Breeders Co-op only 548 lambs come from New Brunswick. That means 58% of its sales are produced out of province. These numbers raise the question whether the present marketing methods of the New Brunswick Sheep Breeders' Co-op are helping to develop the local sheep industry or should new marketing methods be considered.

Conclusions

The information gathered from producers is fairly optimistic regarding future growth. One third of the producers have been in the business five years or less. Over the last year New Brunswick flocks have grown and further growth is planned in the future.

FIGURE 16. SEASONALITY IN CANADIAN LAMB MARKETINGS



There is an opportunity to improve returns to producers through the introduction of more prolific breeds and more frequent lambing. As stated in Sheep Production and Marketing published by Agriculture Canada, "Although the cost of maintaining a ewe carrying twins or triplets is more than that for a ewe carrying a single lamb, it is not twice as much. Similarly, the cost of feeding a ewe that produces three lamb crops in two years is more than that for a ewe that lambs only once a year, but not 1 1/2 times more."

With fresh lamb sales expected to increase over the next five years there is room for expanded production. There is also an opportunity to realize better returns for sheep that are sold during the first half of the year when marketings tend to be lighter.

For New Brunswick to capitalize on the expected increase in demand for fresh lamb, local producers/producer groups will have to have a more organized approach to the market place. This would require that lamb be more easily available to consumers in the cuts they want. If the New Brunswick Sheep Breeders Co-op is to play a role in this it will have to consider alternatives to its present market system that sells more out-of-province lamb than New Brunswick.

Recommendations:

1. The mandate and marketing procedures of the N. B. Sheep Breeders Co-op be reviewed in light of the fact that it only

markets 12% of the province's lamb and 58% of the lamb it does sell is produced out-of-province. It should find a way to better serve local producers.

2. As a folllow-up to number one, more emphasis should be placed on production issues, with the Department of Agriculture's Sheep Specialist primary focus being to deal with production issues such as:

i) the introduction of more prolific breeds

ii) increasing the number of lamb crops and trying to spread production throughout the year

iii) working with producers and regional staff to reduce mortality rates

iv) working with producers to help them get market lambs to optimum weights so they get the best return.

3. The New Brunswick Department of Agriculture study the potential costs and benefits of a provincial meat inspection system. Locally available inspected slaughter could be the best way to improve lamb sales through the province's food retailers. It would also have potential benefits for commodities other than lamb (eg. veal).

4. Promotion of lamb should be the responsibility of the Promotion Officers in the Market Development Branch who are more experienced in promoting agriculture and food products to the province's retail stores, restaurants and consumrs.

5. Promotion programs be developed to deal with consumer's lack of product awareness and preparation skills.

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SURVEY OF NEW BRUNSWICK SHEEP PRODUCERS

Please enter your name, address and phone number below so that we can be sure each operation is only included once when totalling survey results.

NAME: _____

ADDRESS: _____

PHONE: _____

1. Altogether, how many years have you been involved in raising sheep?

_____

The following questions are designed to give a good measure of the size of your operation. Please write the requested number in the space provided.

2. In the fall of 1986;

How many mature ewes did you keep for breeding? _____
How many ewe lambs born in 1986 did you keep for breeding? _____

3. a) How many lambs were born on your farm in 1987? _____

b) How many of your lambs were born during each of the following months? (Please provide your best estimate.)

January _____ April _____
February _____ May _____
March _____
Other _____
_____

4. a) Of those lambs born on your farm in 1987, how many died within 10 days of birth? _____

b) Of those lambs born on your farm in 1987 and living beyond 10 days of birth, how many died before they could be sold or used for breeding? _____

c) Please indicate on the list below approximately how many of the lambs that died after living more than 10 days after birth, died of the following causes:

Pneumonia _____ Internal Parasites _____
Scour _____ Predators _____
Other (Please Specify) _____
_____

d) How many ewes died on your farm in 1987? _____

5. a) Of those lambs born on your farm in 1987, how many were consumed or sold in each of the following months?

January	_____	May	_____	September	_____
February	_____	June	_____	October	_____
March	_____	July	_____	November	_____
April	_____	August	_____	December	_____

b) Of those lambs born on your farm in 1987 and consumed or sold in 1987, how many were consumed or sold through each of the following methods?

On-Farm Consumption	_____	N. B. Sheep Breeders Co-op	_____
Farmers Market	_____	Livestock Dealer/Drover	_____
Direct Sales to Consumers	_____	Local Butcher	_____
Sales Barns	_____		

Other (Please Specify) _____
_____

c) If you plan to make changes in 1988 to the way that your lambs were consumed or sold in 1987, which method do you plan to place increased emphasis on or decreased emphasis on and why?
_____
_____
_____
_____

d) If you indicated in part b) above that you sold some of your lambs through sales barns, please indicate how many lambs you sold through each of the following sales barns?

Sussex _____ Florenceville _____
Truro _____
Other (Please Specify) _____
_____

e) What was the average price per lamb that you received in 1987? (Approximately) $_____

6. In the fall of 1987;

How many mature ewes did you keep for breeding? _____
How many ewe lambs born in 1987 did you keep for breeding? _____

7. a) Of those ewes and ewe lambs kept for breeding in 1987, how many were of the following breeds or breed crosses?

Suffolk _____ Dorset _____
Hampshire _____ Leicester _____
Other (Please Specify) _____
_____
Crosses (Please Specify) _____
_____

7. b) Of those rams used for breeding in 1987, how many were of the following breeds or breed crosses?

Suffolk _____ Dorset _____
Hampshire _____ Leicester _____
Other (Please Specify) _____
_____
Crosses (Please Specify) _____
_____

8. a) Looking ahead over the next two years, do you plan to increase, decrease or maintain the size of your sheep flock? (Please check answer)

Increase _____
Decrease _____
Maintain _____

b) What do you expect will be the total number of breeding ewes on your farm in the fall of 1989? _____

The following questions are designed to determine how your sheep operation fits into your total farm operation.

9. What commodities other than sheep, do you produce/raise on your farm?

Beef _____ Potatoes _____
Hogs _____ Other Vegetables _____
Chicken _____ Fruit _____
Dairy _____ Eggs _____
Other (Please Specify) _____

10. What percentage of your farm income is derived from your sheep operations?

0-25% _____ 50-75% _____
25-50% _____ 75-100% _____

11. Is your farm a full-time or part-time operation?

Full-time _____
Part-time _____

And finally, we would like to ask you some general questions. You may write on the back of the page if the space provided is insufficient.

12. We would like to know if there are any new sheep operations that we do not know about. We would like to let them know about our services. Do you know of any new sheep operations in your area that started up in the last two years? If so, could you please provide the name and/or location of this operation if possible?

_____
_____
_____

13. What problems, if any, have you had in trying to market your sheep?

Thank you for your cooperation. Please return the survey in the postage paid return envelope that was enclosed with the questionnaire.